植 物 分 类 学 报 38(2):167~181(2000)
Acta Phytotaxonomica Sinica

八角属植物的分类学订正*

林 祁
(中国科学院华南植物研究所 广州 510650)
(中国科学院植物研究所 北京 100093)

Taxonomic notes on the genus *Illicium* Linn.

LIN Qi
(*South China Institute of Botany, the Chinese Academy of Sciences*, Guangzhou 510650)
(*Institute of Botany, the Chinese Academy of Sciences*, Beijing 100093)

Abstract Taxonomic notes of the genus *Illicium* Linn. are presented based mainly on herbarium studies involving more than 10 thousand speciemens from 120 herbaria worldwide. Three new combinations are made, viz, *I. fargesii* Finet & Gagnep. subsp. *szechuanensis* (Cheng) Q. Lin, *I. parvifolium* Merr. subsp. *oligandrum* (Merr. & Chun)Q. Lin and *I. micranthum* Dunn subsp. *tsangii* (A. C. Smith)Q. Lin, and thirteen species, six subspecies, three varieties and two forms are reduced to synonyms. Thirty-four species, three subspecies and one variety are recognized in this genus.

Key words *Illicium* Linn.; New synonym; New combination

摘要 根据对18个国家和地区120个标本馆收藏的万余份八角属植物标本的研究,提出3个新组合,对13个种、6个亚种、3个变种和2个变型作了归并,确认全世界现有八角属植物34种3亚种和1变种。

关键词 八角属; 新异名; 新组合

通过对收藏于18个国家和地区120个标本馆(室)的万余份腊叶标本研究,本文对世界现有八角属植物种类作如下处理。

1 假地枫皮(云南植物研究)

Illicium angustisepalum A. C. Smith in Sargentia 7: 36. 1947. TYPE: China. Hongkong, U. On s. n., HK 2062(lectotype, here designated, A 39095, A! isolectotypes, A 39096, 39097, 39098, 39099, A!).

I. jiadifengpi B. N. Chang in Acta Bot. Yunnan. 4(1): 47. 1982, syn. nov. TYPE: China. Guangxi, Longsheng, Guangfu For. Exped. 104(holotype, IBK! isotypes, IBSC! HNNU!); Xingan, C. H. Tsoong 83457(paratypes, IBK! IBSC!); Quanzhou, C. H. Tsoong 81631(paratypes, IBK! IBSC!).

I. minwanense B. N. Chang & S. D. Zhang in Guihaia 5(3): 175. 1985, syn. nov.—— *I. jiadifengpi* B. N. Chang f. *minwanense* (B. N. Chang & S. D. Zhang)Q. Lin in Bull. Bot. Res. 15(2): 197. 1995, syn. nov. TYPE: China. Fujian, Chongan, L. K. Ling 5737(holotype, FNU! isotypes, FNU! KUN!); Anhui, Xiuning, J. Z. Shao 82087, 821076(paratypes, ANUB! PE!).

---

* 国家自然科学基金资助项目(39370056)、中国科学院生物分类区系学科发展特别支持费资助项目、中国博士后基金资助项目。
1998-07-17 收稿, 2000-01-19 收最后修改稿。

I. *jiadifengpi* B. N. Chang var. *baishanense* B.N. Chang & S.H. Ou in Guihaia 5(3): 177. 1985, syn. nov. TYPE: China. Zhejiang, Qingyuan, M. X. Wu 7724(holotype, IBK!), 7601(paratype, IBK!).

I. *wuyishanum* Q. Lin in Journ. Changsha Norm. Univ. Wat. Res. Electr. Pow.2(2): 79. 1987, syn. nov. TYPE: China. Fujian, Chongan, Q. Lin 24(holotype, IBSC! isotypes, FLAS! IBSC! NY!), 25(paratypes, BH! CAS! E! F! IBSC! MIN! PH! RSA!), 62(paratype, IBSC!).

中国特有,生于海拔 400～2100 m 的山地沟谷、山脊或山坡湿润常绿阔叶林中。

China. **Anhui**(安徽): Shitai(石台), H. Qian(钱宏)1291(AAFU); Xiuning(休宁), J. Z. Shao(邵建章)82087, 821076(ANUB, PE). **Fujian**(福建): Chongan(崇安), L. K. Ling (林来官)5737(FNU, KUN); Q. Lin(林祁)24(FLAS, IBSC[2], NY), 25(BH, CAS, E, F, IBSC, MIN, PH, RSA), 62(IBSC); Yongan(永安), L. K. Ling 6586(FNU); Yongding(永定), Y. X. Huang(黄友行)544(FNU); Huaan(华安), W. D. Han(韩维栋)20830(NF); Pinghe(平和), Y. M. Hou *et al*.(侯玉美等)401(FJDC). **Guangdong**(广东): Yangshan(阳山), L. Deng(邓良)1152(KUN); Ruyuan(乳源), Q. Lin 942(IBSC); Jiexi(揭西), CANT 23861(CANT); Shenzhen(深圳), Q. Lin 941 (PE). **Hongkong** (香港): U. On s. n., HK 2062(A[5]). **Guangxi**(广西): Tiane(天峨), Z. T. Li(李中提)601189(KUN); Douan(都安), s. coll.(采集人不详)26 (FJDC); Shanglin(上林), C. X. Cai(蔡灿星)5179(IBSC); Daxing(大新), S. L. Wang(王善龄)38(GZAC); Xiangzhou(象州), C. Wang(黄志)39481 (IBK); Jinxiu(金秀), Q. H. Lu(吕清华)4596(IBK); Luocheng(罗城), C. H. Tsoong(钟济新)83758 (IBK); Rongshui(融水), S. M. Jia(贾世明)53-178(GXMI); Lingui(临桂), L. H. Chun(陈立卿)94682(IBK); Yangshuo(阳朔), Z. Z. Chen(陈照宙)s. n.(IBK); Longsheng (龙胜), Guangfu For. Exped.(广福林队)104(IBK, IBSC, HNNU); Xingan (兴安), C. H. Tsoong 83457(IBK, IBSC); Guanyang(灌阳), Z. Z. Chen 52481(IBK); Ziyuan(资源), J. Q. Ge *et al*.(葛家骑等)47544(GXMI); Quanzhou(全州), C. H. Tsoong 81631(IBK, IBSC). **Hubei**(湖北): Tongcheng(通城), J. Xiong(熊杰)6124 (IBSC). **Hunan**(湖南): Chengbu(城步), T. R. Cao(曹铁如)821346(HUIF); Daoxian(道县), Q. Z. Lin(林亲众)65(CSFI); Yizhang(宜章), Q. Lin 70(IBSC); Liuyang (浏阳), Y. J. Li(李庾嘉)1513(HUTM). **Jiangxi** (江西): Yanshan(铅山), Q. H. Li *et al*.(李启和等)100(LBG); Wuning(武宁), Y. G. Xiong(熊耀国)1226(LBG); Anfu(安福), Y. G. Xiong 7872(LBG); Jinggangshan(井岗山), J. S. Yue(岳俊三) 5436(NAS); Suichuan(遂川), J. S. Yue 4319(PE); Shangyou(上犹), M. X. Nie (聂敏祥)8292(LBG); Lichuan(黎川), X. X. Yang(杨祥学)650128(IBSC); Dexing (德兴), Nanjing For. Uni. Exped.(南林采集组)477(NF); Wuyuan(婺源), Q. H. Li *et al*. 41(LBG). **Zhejiang** (浙江): Chunan(淳安), Chunan Exped.(淳安队)1932 (HZU); Suichang(遂昌), F. G. Zhang *et al*.(张方钢等)4398(ZM); Longquan(龙泉), S. R. Zhang (章绍尧)4805(HHBG); Qingyuan(庆元), M. X. Wu(吴鸣翔)7724(IBK), 7601(IBK).

查阅 *I*. *angustisepalum* 的模式标本和产于香港的标本,得知它与 *I*. *jiadifengpi* 没有区别,故将 *I*. *jiadifengpi* 归并,其种下等级名称亦作相应更改。

I. *minwanense* 的幼树开淡黄色花,不结果,植株成熟后逐渐转而开红色至紫红色花

并结果。这是个体发育的不同阶段性表现，不应该作为种或种下等级处理。

2　白花八角（台湾植物志）

Illicium anisatum Linn. Syst. Nat. 10th ed. 1050. 1759. TYPE: Kaempfer. Amoen. Exot. Fasc. fig. page 881. 1712. (lectotype, BM!).

I. philippinense Merr. in Philip. Journ. Sci. Bot. 4:254. 1909. TYPE: Philippines. Luzon, Zambales Prov., Mt. Tapulao, H. M. Curran & M. L. Merritt 9515 (lectotype, US! isolectotype, B!).

I. montanum Merr. in Philip. Journ. Sci. Bot. 7(2): 81. 1912, syn. nov. TYPE: Philippines. Luzon, Bontoc Subprov., Bauco, M. Vanoverbergh 1048 (lectotype, K! isolectotype, B!).

I. anisatum Linn. var. *leucanthum* Hayata, Gen. Ind. Fl. Formos. 2. 1916.——*I. leucanthum* (Hayata) Hayata, Ic. Pl. Formos. 9: 2. f. 2. 1920. TYPE: China. Taiwan, on Arisan, in 1916, Hayata s. n. (unknown).

I. randaiense Hayata, Ic. Pl. Formos. 9: 2. f. 3. 1920. TYPE: China. Taiwan, Nantou, Hayata & Mori s. n. [lectotype (original isotype), here designated, A!].

I. religiosum Sieb. & Zucc. var. *masa-ogatai* Makino in Journ. Jap. Bot. 4: 5, f. 1. 1927, syn. nov.——*I. masa-ogatai* (Makino) A. C. Smith in Sargentia 7: 32. 1947, syn. nov. TYPE: Japan. Tokyo, originally obtained on Okianwq, Ryu Islands (unknown).

I. daibuense Yamamoto, Suppl. Ic. Pl. Formos. 5: 22, f. 7. 1932.——*I. philippinense* Merr. var. *daibuense* (Yamamoto) S. S. Ying, Col. Ill. Fl. Taiwan 1: 235, f. 100. 1985. TYPE: China. Taiwan, on Daibuzan, in 1918, Matsuda s. n. (unknown).

沿东亚岛弧分布，产日本、韩国南部、中国和菲律宾，生于海拔 1000～2500 m 的山地湿润常绿阔叶林中。

Japan. **Honshu**: Sendai, U. Faurie 3832 (G); Tokyo, T. Matsuki 390 (US); Chiba, T. Makino, 20 Apr. 1937 (E); Yokohama, s. coll., Apr. 1915 (S); Izu, Hayakawa, 6 Sept. 1924 (W); Settsu, M. Togasi 1508 (BH); Kyoto, H. Muroi 68 (A); Osaka, M. Hotta 11784 (E); Kii, M. Tamura 9367 (S); Okayamaken, K. Uno 2611 (BH); Hiroshima, M. Hiroe 12035 (UC); Wakayama, G. Masamune, Apr. 1925 (NY); Yamaguchi, L. A. Charette 1621 (S); Shiga, M. Hiroe 16452 (UC); Saitama, H. J. Elwes & K. Watanabe, 1 Apr. 1895 (K); Miyajma, D. Fred & C. Baker, 27 Mar. 1914 (CAS); Nagamo, J. G. Jack, 3 Sept. 1905 (A); Ise, M. Hiroe 7259 (UC); Mie, M. Hiroe 12907 (UC); Ibaraki, H. Takeda 208 (K); Gifu, J. Murata, 28 Apr. 1984 (TUS); Hyogo, H. Muroi 347 (A); Shizuoka, A. Takehara & T. Nemoto 85 (TUS); Yamato, M. Tamura 24628 (E); Yokosuka, L. Savatier 45 (A); Miyagi, K. Goshima & S. Otomo 15 (A); Fukushima, T. Nemoto 2937 (A). **Shikoku**: Tokushima, B. Krug 1059 (B); Kagawa, M. Takahashi 1785 (A); Kochi, T. Makino, 6 May, 1885 (UC); Tosa, M. Yamanaka, 10 May, 1959 (TUS). **Kyushu**: Fukuoka, T. Tanaka 183 (UC); Nagasaki, R. Oldham 20 (S); Kumamoto, C. Sato 1499 (TUS); Kagoshima, E. H. Wilson 6170 (MO). **Ryukyu islands**: Yakushima, G. Masamune s. n. (NY); Amami-ohshima, R. Kanehira 3415 (NY); Tokunoshima, J. Murata 10319 (TUS); Kunigami, S. Sonohara *et al*. 6336 (A); Okinawa, R. Kanehira 3278 (NY); Ishigaki, S. Hatusima 19008 (L); Iriomote, T. Yamazaki 2932 (RSA).

Korea. Cheju-do, Quelparet, T. Taquet 838 (A).

China. **Taiwan**(台湾): Taibei(台北), Keng s. n.(E); Yilan, Kao 3232(BH); Taoyuan(桃园), Yang 1259(TUS); Xinzhu(新竹), Chen 151(CAS); Taizhong, Liu 188(A); Nantou(南投), Hayata & Mori s. n.(photo of isotype of *I. randaiense*, A!); Jiayi(嘉义), Ito 529 (UC); Pingdong, Chang 3340(TUS); Hualian(花莲), Shimizu & Kao 11873(RSA).

Philippines. Luzon, Bontoc, M. Vanoverbergh 1048(B); Zambales, Curran & Merritt 9515 (B); Mindoro, Edano 3277(A).

本种的后选模式是一幅花果同枝的图,图上注有该植物的日文名称,清晰可见中脉在叶面凸起,花被片长椭圆形至狭舌状,心皮8枚,这显然就是分布在东亚岛弧上的此种植物。

查阅近1000份标本,不能将 *I. anisatum*、*I. masa-ogatai* 和 *I. philippinense* 区别开来。日本、韩国、中国台湾和菲律宾的标本性状呈逐渐变化和相互交叉的现象。菲律宾的标本花为白色、叶片较窄短(也有宽叶类型);中国台湾的标本花多为白色(有的带粉红色或淡黄色)、叶片窄至宽的类型均有(以窄叶型居多);日本和韩国的标本花多为白色(粉红色至红色或淡黄色的也有)、叶片宽窄类型约各为一半。而各自叶片的侧脉数目、花被片数目和雄蕊数目的变化范围则基本一致。因此,将它们作归并处理。

应绍舜(1985)将窄叶型(倒披针形)标本分出,作为变种。经查阅白花八角的标本,此叶形的标本在日本、韩国、中国台湾和菲律宾均有,且同一号标本上叶片宽1~3 cm的亦有,故此变种不宜成立。

本人在"Flora of Taiwan"(2: 427~429, 1996)中修订了一些名称,但没说明原由,在此文中特作解释。

3 台湾八角(台湾植物志)

Illicium arborescens Hayata, Ic. Pl. Form. 2:105, 1912. TYPE: China. Taiwan, Alishan, Jan. 1912, B. Hayata & S. Sasaki s. n.[lectotype(original syntype), here designated, K!]; Nantou, T. Kawakami & U. Mori 3376[photo (original syntype), A!].

I. arborescens Hayata var. *oblongum* Hayata, Ic. Pl. Form. 2: 106 1912. TYPE: China, Taiwan, s. coll.[lectotype(original isotype), here designated, A!].

中国(台湾)特有,生于海拔200~1500 m的湿润常绿阔叶林中。

China. **Taiwan**(台湾): s. coll.(photo of type of *I. arborescens* var. *oblongum*, A!); Alishan(阿里山), B. Hayata & S. Sasaki, Jan. 1912.(K); Taibei, K. C. Yang 678(TAI); Taizhong, s. coll.(NAS); Nantou, T. Kawakami & U. Mori 3376[A(Photo)]; Jiayi, Faurie 1535(A); Gaoxiong(高雄), Y. R. Lin *et al*. 407(HAST); Pingdong, C. C. Liao *et al*. 206 (HAST); Taidong(台东), R. Kanehira 21306(NY); Hengchun (恒春), C. L. Chiu 161 (PNH).

查阅 *I. arborescens* var. *oblongum* 模式标本的照片,可见中脉在叶面明显下凹成沟状,花被片圆形至宽卵形,内凹。显然就是台湾八角,故将其归并。

4 中缅八角(中国植物志)

Illicium burmanicum Wils. in Journ. Arn. Arb. 7: 238, 1926. TYPE: Myanmar. Kachin, Myitkyina, J. F. Rock 7408(holotype, A! isotypes, B! NY! US!), 7399(paratypes, A! UC!

US!).

I. macranthum A. C. Smith in Sargentia 7: 21, f. 6. a ~ g. 1947, syn. nov. TYPE: China. Yunnan, Pingbian, A. Henry 10182(holotype, A! isotypes, E! IBSC! MO! NY!), 10182a (paratypes, A! E! K!), 10182b(paratypes, A! E! NY! MO!), 9451 (paratypes, K! NY!), 9451a(paratypes, A! US!); G. Forrest 17820(paratype, E!).

产中国、缅甸和印度，生于海拔 1800 ~ 2800 m 的山地沟谷、溪边或山坡常绿阔叶林中。

China. **Yunnan**(云南): Yunlong(云龙), Y. C. Hsu(徐永椿)1136(SWFC); Tengchong (腾冲), C. Chen(陈介)323(KUN); Fengqing(凤庆), L. F. Xia(夏丽芳)406(KUN); Jingdong(景东), B. Y. Qiu(邱炳云)52833(KUN); Shuangjiang(双江), 木 273(SWFC); Luchun (绿春), D. D. Tao(陶德定) 797(KUN); Pingbian(屏边), A. Henry10182(A, E, IBSC, MO, NY), 10182a(A, E, K), 10182b(A, E, NY, MO), 9451(K, NY), 9451a(A, US); G. Forrest 17820(E); Jinping(金平), H. W. Li(李锡文)321 (KUN); Maguan(马关), S. K. Wu (武素功)61-3578b(KUN); Malipo(麻栗坡), K. M. Feng(冯国楣)22983(KUN). **Xizang**(Tibet 西藏): Mêdog(墨脱), H. Sun *et al*.(孙航等)ETM-2065(KUN).

Myanmar. **Kachin**: Myitkyina, J. F. Rock 7408(A, B, NY, US), J. F. Rock 7399(A, UC, US); Bhamo, C. E. Parkinson 5327(paratype of *I. wardii*, K!).

India. Khaiyang, F. K. Ward 17417(A, BM).

I. burmanicum 与 *I. macranthum* 的模式标本略有差异，但将两个模式产地之间的标本按相邻产地连接起来排列比较，各标本之间出现连续变异或性状交叉，显然这两个模式是取同一种植物在分布区西北和东南两地的极端类型而命名的。故作归并处理。

5 古巴八角 新拟名

Illicium cubense A. C. Smith in Sargentia 7: 59. 1947. TYPE: Cuba. Oriente, Gran Piedra, J. A. Shafer 9047(holotype, NY 60, NY! isotypes, A! NY 61, NY! US!); Loma del Gatu and La Guinea, C. Wright 3(paratypes, BM! F! G! MO! PH! UC!); road to Pinal from Mayari Abajo, C. Wright 1844(paratypes, BM! G! MO! UC!); Sierra de Nipe, J. A. Shafer 3612(paratype, F!); San Jose, Sierra de Nipe, R. A. Hoeard 6027(paratypes, MO! NY!).

I. cubense A. C. Smith subsp. *bissei* N. N. Imkh. in Bot. Zhurn. 78(7):4.1993, syn. nov. TYPE: Cuba. Oriente, Moa, J. Bisse 7094(holotype, HAJB! isotype, JE!); road to Pinal from Mayari Abajo, C. Wright 1844(paratypes, BM! G! MO! UC!); Sierra de Nipe, J. A. Shafer 3612(paratype, F!); crest of Sierra de Nipe, C. V. Morton & J. Acuna 3204(paratype, F!); San Jose, Sierra de Nipe, R. A. Hoeard 6027(paratypes, MO! NY!).

I. cubense A. C. Smith subsp. *guantanamense* N.N. Imkh. in Bot. Zhurn. 78(7):7. 1993, syn. nov. TYPE: Cuba. Guantanamo, Imias, J. Bisse 52362(holotype, HAJB! isotype, JE!).

I. cubense A. C. Smith subsp. *rangelense* N. N. Imkh. in Bot. Zhurn. 78(7):8. 1993, syn. nov. TYPE: Cuba. Pinar del Rio, bajada al Arroyo Plata, Hno 536(holotype, HAC! isotypes, GH! US!); Rangel, B. Alain 416(paratype, NY).

I. cubense A. C. Smith subsp. *guajaibonense* N. N. Imkh. in Bot. Zhurn. 78(7): 10.

1993, syn. nov. TYPE: Cuba. Pinar del Rio: en la falda Norte del Pande Guajaibon, Hno 2972 (holotype, HAC! isotype, GH!).

古巴特有,生于海拔 300~700 m 的丘陵山地灌丛或林缘。

Cuba. Oriente, Loma del Gatu and La Guinea, C. Wright 3(BM, F, G, MO, PH, UC); road to Pinal from Mayari Abajo, C. Wright 1844(BM, G, MO, UC); Sierra de Nipe, J. A. Shafer 3612(F); crest of Sierra de Nipe, C. V. Morton & J. Acuna 3204(F); San Jose, Sierra de Nipe, R. A. Hoeard 6027(MO, NY); Gran Piedra, J. A. Shafer 9047(A, NY[2], US); Rangel, B. Alain 416(NY).

将产于古巴的标本进行比较,根据全属种类(含种下等级)情况进行衡量,无法再在古巴八角下划分种下等级,故将 N. N. Imkhanitskaya(1993)的亚种作归并处理。

6 华中八角(云南植物研究)

Illicium fargesii Finet & Gagnep. in Bull. Soc. Bot. Fr. 52: Mem. 4: 29, pl. 4, A, 1~14. 1905. TYPE: China. Sichuan, Chengkou, Houping, R. P. Farges 208 (lectotype, here designated, P! isolectotypes, P! A[2]!).

6a 华中八角

subsp. **fargesii**

中国特有,生于海拔 800~2300 m 的山地沟谷、溪边或山坡常绿阔叶林中。

China. **Hubei**(湖北): Enshi(恩施), H. J. Li(李洪钧)6072(HIB); Xuanen(宣恩), H. J. Li 5724(WH); Hefeng(鹤峰), Y. M. Wang(王映明)1556(HIB); Zhuxi(竹溪), s. coll. & n.(记录不详)(HIB). **Hunan**(湖南): Shimen(石门), J. D. Wen(温俊达)850530(HUTM); Sangzhi(桑植), T. R. Cao(曹铁如)90505(CSFI); Chengbu, T. R. Cao821022(HNNU). **Guangxi**(广西): Ziyuan, J. H. Wei(韦家福)7070(GXDC); Longsheng, Z. T. Li 600468 (IBK); Xinan(兴安), Z. Z. Chen 51256(IBK); Quanzhou, Z. J. Zhou(周子静)41306(GXMI); Jinxiu, D. A. Huang(黄德爱)60617(IBSC); Rongshui, G. R. Long(龙光日)83044(IBSC). **Guizhou**(贵州): Tongzi(桐梓), Tongzi Exp.(桐梓队)8(GZHTM); Suiyang(绥阳), Y. K. Li(李永康)313(GZAC); Zunyi(遵义), J. M. Chen(陈家明)599(GZTM); Xifeng(息峰), Anling Agr. coll. Exped.(安岭农院队)762022(GZAC); Yinjiang(印江), Z. S. Zhang *et al*. (张志松等)401552(IBSC); Songtao(松桃), GZTM Exped.(黔中研所队)28(GZTM); Jiangkou (江口), Z. S. Zhang *et al*. 400589(IBSC); Kaili(凯里), S. Guizhou Exped.(黔南队) 1137 (HAGS); Leishan(雷山), K. M. Lan(蓝开敏)85-488(GZAC); Rongjiang(榕江), S. Guizhou Exped. 2974(NAS). **Sichuan**(四川): Leibo(雷波), SZ 71170(SZ); Yunlian(筠连), K. P. Yin(印开蒲)399(CDBI); Gulin(古蔺), K. P. Yin 574(CDBI); Chongqing(重庆), Chongqing Exped(重庆组)361(HWA); Nanchuan(南川), Q. Lin 982(PE); Chengkou(城口), R. P. Farges 208(P[2], A[2]); Wuxi(巫溪), G. H. Yang(杨光辉)59235(FUS). **Yunnan**(云南): Daguan(大关), J. M. Zeng(曾觉民)3347(SWFC); Yiliang(彝良), NE. Yunnan Exped.(滇东北队)732(KUN); Zhenxiong(镇雄), NE. Yunnan Exped. 1230(KUN).

6b 川茴香(峨眉植物图志) 新等级

subsp. **szechuanensis** (Cheng) Q. Lin, stat. nov.——*I. szechuanensis* Cheng in Fang, Ic.

Pl. Omeiens. 1(1): pl. 6. 1942.——*I. fargesii* Finet & Gagnep. var. *szechuanensis* (Cheng) Q. Lin in Acta Bot. Yunnan. 17(3): 297. 1995.—— *I. jiadifengpi* B. N. Chang var. *szechuanensis* (Cheng) Law & B. N. Chang in Journ. Sichuan Norm. Univ. (Nat. Sci.) 16(6): 46. 1993. TYPE: China. Sichuan, Ebian, H. T. Tung 1018(holotype, SZ!).

中国特有,生于海拔 1700~2200 m 的山地常绿阔叶林中。

China. **Sichuan** (四川): Yingjing(荥经), Zhao, Han et Jiang(赵、韩、蒋) 11(SCFI); Hongya(洪雅), SCFI Exped.(四川林科所队) 2001(SCFI); Emei(峨眉), T. N. Liou(刘慎谔) 10361(IBSC); Ebian(峨边), H. T. Tung 1018(SZ); Pingshan(屏山), Sichuan Econ. Pl. Exped.(川经植) 1219(PE).

本人曾将川茴香作为华中八角的变种,现考虑二者主要已被四川盆地隔离,则作为地理亚种更为适宜。

7 佛罗里达八角 新拟名

Illicium floridanum Ellis in Philos. Trans. 60:529, pl. 12. 1770. TYPE: U. S. Florida, details unknown.

I. mexicanum A. C. Smith in Sargentia 7: 39. 1947, syn. nov. TYPE: Mexico. Vera Cruz, Sierra Madre, C. A. Purpus 6137(holotype, UC! isotypes, A! BM! F! MO! NY! US!).

I. floridanum Ellis f. *album* F. G. Mey & P. M. Mazzeo in Sida 15(2): 285. 1992, syn. nov. TYPE: U. S. Mississippi, Lawrence, Mazzeo & Dodd 3168(holotype, NA! isotype, A!).

产美国和墨西哥,生于海拔 1900 m 以下的丘陵山地沟谷、溪边、河边及平原湿润常绿阔叶林中。

USA. **Alabama**: Atmore, O. Blanton 217(S); Autauga, S. H. Sloweuke 10562(PH); Barbour, W. Rhoades, July 1931(BH); Baldwin, J. Ewan 23009(BH); Bill, R. F. C. Naczi 1531 (US); Butler, E. J. Palmer 38690(NY); Chilton, R. D. Whetstone *et al*. 9656(NY); Choctaw, H. H. Iltis 25157(BH); Conecuh, M. G. Henry 2685(PH); Coosa, L. J. Davenport 1834 (NY); Covington, M. G. Henry 4588(PH); Elmore, C. L. Pollard & W. R. Maxon 300(S); Escambia, R. Kral 29997(PH); Geneva, J. W. Hardin & W. H. Duncan 13879(BH); Henry, C. E. Wood 9608(A); Houston, R. Kral 46167(MO); Lamar, R. Kral 45175(MO); Lee, F.S. Earle 2044(F); Marion, J. E. Benedict, 24 Apr. 1928(PH); Mobile, F. G. Meyer & P. M. Mazzeo 10416(RSA); Monroe, R. R. Haynes 7706(NY); Tuscaloosa, E. J. Palmer 35387 (NY). **Florida**: Baker, F. G. Meyer & P.M. Mazzeo 10694(RSA); Bay, West & Arnold, 16 March 1937(PH 760733, PH); Calhoun, R. K. Godftry 56347(UC); Escambia, J. A. Churchill 6332232(RSA); Funiak Springs, A.H. Curtiss 6378(G); Gadsden, C. R. Bell 1518(M); Leon, T. Plowman 13333(F); Liberty, R.K. Godfrey & B. W. Wells 52924(GB); Milton, J. K. Small *et al*. 12782(NY); Okal oosa, R. K. Godfrey 62695(US); Pensacola, H. O'Neill 6085 (S); Tuscaloosa, R. Mcvaugh 8571 (G); Walton, R. K. Godfrey 54115(S); Watulla, 27 March, 1940, Baker s.n.(PH). **Georgia** : Savannah, P. Pond s. n.(NY). **Louisiana**: East Feliciana, 5 Aug. 1894, W. R. Dodson s. n.(MO); Livingston, J. W. Thieret & R. Jones 18969(MIN). **New Orleans**: T. Drummond 7(G); St. Helena, F. H. Utech & M. Ohara 83-039(W); St.Tammany, J. Ewan 17682(MO); Tangipahoa, R. D. Thomas 32561(PH). **Washington**: D. S. & H. B. Correll 9230(NY). **Mississippi**: Amtte, J. Pruski 1994(NY); Forrest,

M. G. Henry 4874(PH); Harrison, G. L. Webster & R. L. Wilbur 3448(G); Hancock, D. Demaree 36302(S); Jackson, D. Demaree 34723(S); Jones, C. Ritchie Bell 1493(S); Lamar, S. B. Jones 2680(E); Lauderdale, 27 Apr. 1915, T. G. Harbison s. n. (A); Lawrence, R. Reid & W. Reid 1147(NY); Ocean Springs, A. B. Seymour 91911(S); Pearl River, R. D. Thomas *et al*. 42937(NY); Picayune, F. H. Sargent 8555(GB); Simpson, 26 July, 1892, S. B. Muller s. n. (US); Smith, S. McDaniel 3066(NY). **North Carolina**: Asheville, B. K. Boom 39301(WAG). **Pennsylvania**: Philadelphia, 18 June, 1970, J. Dourley s. n. (RSA). **Texas**: Austin, 24 Apr. 1892, Parkcisau s. n. (LY). **Virginia**: Williamsburg, S. A. & H. C. Spongberg 73-126(BM). **Washington D. C.**: 21 Feb. 1860, A. Schott s. n. (F).

Mexico. Tamaulipas: Gomez Farias, H. Puig *et al*. 2482(MEXU). **Vera Cruz**: Sierra Madre, C. A. Purpus 6137(A, BM, F, MO, NY, US); Coatepec, M. Cnazaro & J. Camarillo 100437(IBUG).

查阅近1000份北美的标本,不能将 *I. floridanum* 与 *I. mexicanum* 区别开来。

本种植物花色变化大,从酱紫色、紫红色、粉红色至粉白色均有,以花粉白色而作为变型 *I. floridanum* f. *album* 不足取。

8 小花八角(广西植物名录)

Illicium micranthum Dunn in Hook. Ic. Pl. 28: pl. 2714. 1901. TYPE: China. Yunnan, Simao, A. Henry 12224[lectotype(original syntype), here designated, E! isolectotypes, A! B! MO!], 12108(original syntypes, E! A!), 12108a(original syntype, K!), 12224a(original syntypes, A! K! A! NY!), 12224b(original syntypes, A! E! MO! UC!), 12224c(original syntypes, NY[2]!).

I. wangii Hu in Bull. Fan Mem. Inst. Biol. 10: 120. 1940. TYPE: China. Yunnan, Menghai, C. W. Wang 73695(holotype, PE! isotypes, A! PE!).

I. modestum A. C. Smith in Sargentia 7: 51. 1947. TYPE: China. Yunnan, Menghai, C. W. Wang 75376(holotype, A! isotypes, KUN! NAS! PE! WUK!).

I. jinyunensis He in Journ. SW Agr. Univ. 10(3): 292, pl. 1: 1~9. 1988, syn. nov. TYPE: China. Chongqing, Jinyunshan, Z. He 690(holotype, HWA!), 403(paratype, HWA!), 1087(paratype, HWA!), 1090(paratype, HWA!).

8a 小花八角

subsp. **micranthum**

中国特有,生于海拔500~2600 m的山地湿润常绿阔叶林中。

China. Guangdong(广东): Fengkai, Yue(粤)74-4888(IBSC); Guangning(广宁), G. L. Shi 14418(IBSD); Deqing(德庆), Y. G. Liu(刘英光)965(IBSC); Yunfu(云浮), C. Wang 37300(IBK); Gaozhou, S. S. Sin(辛树帜)21344(IBSC); Yangchun, C. Wang 38558(IBSC); Lianxian(连县), L. D. Ren(任良栋)2041(IBSC); Lianshan, P. C. Tam 58733(IBSC); Liannan, P. C. Tam 58873(IBSC). **Guangxi**(广西): Longsheng, longsheng Exped. 50202(SYS); Xingan, Z. Z. Chen 1385(IBK); Luocheng, Beijing Exped. 895625(PE); Xiangzhou, C. Wang 39499(IBK); Mashan, IMD 0001(IMD); Shanglin, C. X. Cai 5406(IBK). **Guizhou**(贵州): Chishui, Q. G. Tian(田启光)2-59(SCFI); Sinan(思南), S. T. Li(李申太)94(GZHTM);

Yingjiang, Sino-Amer. Exped.(中美队)1505(PE); Jiangkou, Z.S. Zhang *et al*. 402297(IBSC); Hezhang, Hezhang Exped.(赫普办)241(GZHTM); Bijie, J. G. Huang(黄佳贵)86-21(GZHTM); Qianxi(黔西), Z. X. Wang(王再先)165(GZHTM); Qingzhen, J. Z. Yang(杨济中)160(GZTM); Shuicheng(水城), H.Z. Ruan(阮海知)2-001(HGAS); Xingren(兴仁), GZTM Exped. 20(GZTM); Anlong, Z. S. Zhang *et al*. 4815(PE). **Hubei**(湖北): Lichuan, J. C. Hua 614(NF). **Hunan**(湖南): Guzhang, Z. H. Shen(沈中翰)1220(CSFI); Zhijiang, P. C. Tam 60827(HNNU); Qianyang, X.G. Li 202932(IBSC); Dongkou, Z. Y. Yang(杨泽永)1290(CSFI); Suining, D.Z. Huang(黄德众)255(HUTM); Chengbu, T. R. Cao 831231 (CSFI); Xinning, Y. B. Luo(罗毅波)2355(PE); Daoxian, Y. C. Fang(方英才)63(NYA); Nanyue, CSFI 554(CSFI). **Sichuan**(四川): Daxian, Daxian Exped. 374(SM); Dazhu(大竹), 竹 675(SM); Lingshui(邻水), Daxian Exped. 417(SM); Zhongxian(忠县), H. Y. Wang(王洪业)1286(SZ); Shizhu, J. A. Wang(王金鳌)197(SCFI); Pengshui, Fuling Exped.(涪陵队)959(SM); Qianjiang(黔江), Fuling Exped. 682(SM); Xiushan, Fuling Exped. 603(SM); Wulong(武隆), Fuling 843(SM); Fuling, Fuling 262(SM); Nanchuan, Q. Lin 981(PE); Chongqing, Z. He(何铸)403, 690, 1087, 1090(HWA); Tongliang(铜梁), Tongliang Exped. 472(SM); Hechuan(合川), Hechuan Exped. 817(SM); Bishan(璧山), Bishan Exped. 451(SM); Yongchuan(永川), Yongchuan Exped. 336(SM); Jiangjin(江津), Jiangjin Exped. 254(SM); Hejiang, Z. H. Dai(戴正宏)7(SCFI); Shilin(石磷), B. L. Li(李伯良)412(SZ); Xuyong (叙永), Xuyong Exped. 77-664(SM); Gulin, Gulin Exped. 894(SM); Changning(长宁), s. coll. 253(SM); Leibo, K. T. Yang(杨开太)11599(SCFI); Ebian, F. T. Wang (汪发瓒)1026(WUK); Emei, X. S. Zhang(张秀实)10230(SCFI); Ya'an(雅安), Ya'an Exped. 527(SM); Weiyuan(威远), Weiyuan Exped. 129(SM); Mianning, T.T. Yu 17720 (KUN). **Yunnan**(云南): Zhenxiong, S.Y. Bao(包士英)137(KUN); Huize, SWFC 27167(SWFC); Shuangbai, S. Q. Huang 145(KUN); Jingdong, M. G. Li(李鸣岗)959(KUN); Lincang (临沧), T. P. Zhu(朱太平)166(KUN); Zhenyuan(镇源), Zijiao Exped.(紫胶队)520(SWFC); Xinping, Q. Lin 45(IBSC); Yuanjiang, G. W. Wu(吴桂文)8870923 (SWFC); Gengma, Sino-USSR Exped. 5585(IBSC); Shangjiang, J. S. Sin(辛景三)777 (KUN); Lancang(澜沧), T. P. Zhu 166(HITBC); Simao(思茅), A. Henry 12224(A, B, E, MO), 12108(E, A), 12108 a(K), 12224 a(A, K, A, NY), 12224 b(A, E, MO, UC), 12224 c(NY[2]); Menglian(勐连), Menglian Exped. 9661(HITBC); Menghai(勐海), C. W. Wang 73695(A, PE[2]), C. W. Wang 75376(A, KUN, NAS, PE, WUK); Jinghong(景洪), G. D. Tao(陶国达)44641(HITBC); Luchun, D. D. Tao 831(KUN); Jinping, Q. Huang 538(CAF); Mengzi(蒙自), Y. Y. Hu(胡月英)580560(KUN); Wenshan, K. M. Feng 22021(IBSC); Guangnan, C. W. Wang 87496(PE); Maguan, Q. A. Wu 8600(KUN); Xichou, S. Z. Wang(王守正)642(KUN); Malipo, K. M. Feng 22707(KUN).

查阅 *I. jinyunensis* 的模式标本,其所有性状均在小花八角种内变化幅度范围之中,故将其归并。

8b 岭南八角 新组合 新拟名

subsp. **tsangii** (A. C. Smith)Q. Lin, comb. et stat. nov.——*I. tsangii* A. C. Smith in Sargentia 7: 61, f. 11: h~l. 1947. TYPE: China. Guangdong, Zengcheng, W. T. Tsang 20397 (holotype, A! isotypes, IBSC! KUN! NY[2]! SYS!), 20268(paratypes, IBSC! KUN! NY! PE! SYS!); Xinfeng, Y. W. Taam 564(paratypes, A! E! G! HBG! Z! CAS! US!); Conghua, W. T. Tsang 24941(paratypes, A! E! IBSC! CAS!).

中国特有,生于海拔 300~1500 m 的红壤或红黄壤山地湿润常绿阔叶林中。

China. **Fujian**(福建): Pinghe, X. Q. Chen(陈星球)10622(AU). **Guangdong**(广东): Yangshan, P. C. Tam & X. X. Huang(谭沛祥、黄向旭)353(IBSC); Xinfeng, Y. W. Taam 564(A, E, G, HBG, Z, CAS, US); Conghua, W. T. Tsang 24941(A, E, IBSC, CAS); Longmen, G. Z. Zhang 345(IBSC); Zengcheng, W. T. Tsang 20397(A, IBSC, KUN, NY[2], SYS), W. T. Tsang 20268(IBSC, KUN, NY, PE, SYS); Boluo, Y.Q. Wang 574(IBSC); Jiaoling(蕉岭), L. Deng 4858(IBSC); Fengshun, X. G. Li 201496(IBSC); Raoping, X. G. Li 200754(IBSC); Chaoxhou(潮州), N. Q. Chen 42757(SZ). **Hongkong**(香港): Maanshan, F. W. Xin(邢福武)7481(IBSC). **Hunan**(湖南): Jiangyong, P. C. Tam 62396(IBK); Jianghua, R. J. Li 7300020(HUTM); Yizhang, L. H. Liu 703(HNNU).

野外采集和查阅 *I. tsangii* 的标本,发现除成熟叶片较厚,先端渐尖,叶背油点较大和花被片较大以外,与小花八角没有区别。考虑二者的分布区不重叠,几乎为红色石灰土和珠江中下游水稻土所隔离,故将其作为小花八角的地理亚种处理。

9 小叶八角 新拟名

Illicium parvifolium Merr. in Journ. Arn. Arb. 19: 27. 1938. TYPE: Vietnam. Annam, Mt. Ba Na, J. & M. S. Clemens 4192(holotype, A! isotypes, BM! CAS! G! K! NY! PH! US! Z!).

9a 小叶八角

subsp. **parvifolium**

越南特有,生于山地常绿阔叶林中。

Vietnam. Annam, Mt. Ba Na, J. & M. S. Clemens 4192(A, BM, CAS, G, K, NY,PH, US, Z); Saigon, D. Bois 861(LY).

9b 少药八角 新组合 新等级

subsp. **oligandrum** (Merr. & Chun)Q. Lin, comb. et stat. nov.——*I. oligandrum* Merr. & Chun in Sunyatsenia 5: 57, f. 3. 1940. TYPE: China. Hainan, Baoting, F. C. How 72901 (holotype, A! Isotypes, BM! G! IBSC! KUN! PE!); Dingan, C. Wang 35490, 35509(paratypes, IBSC! NY!), 36015(paratypes, IBSC! NY! PE!); same loc., H. Y. Liang 64359(paratypes, IBSC! NY! PE! US!); Ledong, S. K. Lau 27307, 27315 (paratypes, A! IBSC! NAS! PE!).

中国特有,生于海拔 300~1300 m 的山地湿润常绿阔叶林中或灌丛中。

China. **Guangxi**(广西): Fangcheng, S. H. Chun 5258(IBSC); Bobai(博白), S. Q. Zhong(钟树权)A-63464(IBK). **Hainan**(海南): Dingan(定安), C. Wang 35490, 35509(IBSC, NY), C. Wang 36015(IBSC, NY, PE); H. Y. Liang 64359(IBSC, NY, PE, US); Wangning, Y. Zhong(钟义)4156(IBSC); Lingshui(陵水), Hainan Exped.(海南站)1917(IB-

SC)；Baoting(保亭)，F. C. How(侯宽昭) 72901(A, BM, G, IBSC, KUN, PE)；Ledong(乐东)，S. K. Lau 27307, 27315(A, IBSC, NAS, PE).

解剖 *I. oligandrum* 的花，雄蕊和心皮数目与小叶八角互有交叉，而其它方面完全一致。考虑二者主要由北部湾所隔离，故将其作为小叶八角的地理亚种处理。

10 北美小花八角 新拟名

Illicium parviflorum Michx. ex Vent. Tabl. Reg. Veg. 3: 71. 1799. TYPE: U. S. Lake George, details unknown.

I. ekmanii A. C. Smith in Sargentia 7: 42. 1947, syn. nov. TYPE: Haiti. Massif du Nord, Marmelade, E. L. Ekman H. 8209(holotype, US! isotype, MO!)；Massif de la Hotte, E. L. Ekman H. 9002(paratype, G!)；Montagnes de la Hotte, W. J. Eyerdam 361(paratype, NY).

I. ekmanii A. C. Smith subsp. *selleanum* N. N. Imkh. in Bot. Zhurn. 78(7): 11. 1993, syn. nov. TYPE: Haiti. Massif de la Selle, Port-au-Prince, E. Ekman 2230(holotype, US!).

I. ekmanii A. C. Smith subsp. *domingense* N. N. Imkh. in Bot. Zhurn. 78(7): 12. 1993, syn. nov. TYPE: Dominica, Loma del Puerto, Puerto Plata, Bro. Alain H. Liogier. 15550 (holotype, NY! isotypes, GH! US!)；SW Bonao, B. A. H. Liogier 14800(paratype, US!)；Piedra Blance, B. A. H. Liogier 18649(paratypes, F! US!)；Puerto Plata, B. A. H. Liogier 14584(paratypes, NY! US!).

产美国、多米尼加和海地，生于海拔 1300 m 以下的丘陵山地山脊、沟谷、溪边、湖岸湿润林中或灌丛中。

USA. **Alabama**: Lee, G. R. Hopson & H. Ponder 78(PH). **Florida**: Alachua, S. Carlquist 15640(RSA)；Gainseville, R. F. Thorne 19527(RSA)；Lake, R. F. Thorne & W. Judd 57992(RSA)；Leon, F. G. Meyer & P. M. Mazzeo 11182(RSA)；Marion, 22 Sept. 1950, Mather *et al*. s. n.(F)；Orange, 7 Jan. 1916, S. C. Hoon s. n.(MO)；Orlando, L. H. Bailey 6785(BH)；Polk, B. Hansen & D. Richardson 5711(RSA)；Seminole, CAS 135793(CAS). **Georgia**: in 1808, Fraser s. n.(NY). **Louisiana**: New Orleans, L. Bougere 1(US). **South Carolina**: Pickens, S. R. Hill 19712(NY). **Virginia**: Portsmouth, FS-256(NY).

Dominica. Distrito Nacional, W. S. Judd *et al*. 6506(NY)；SW Bonao, B. A. H. Liogier 14800(US)；Piedra Blance, B. A. H. Liogier 18649(F, US)；Peravia, M. J. Pimentel 23803 (MO)；Puerto Plata, B. A. H. Liogier 14584(NY, US)；Santiago, T. Zanoni *et al*. 32789 (NY).

Haiti. Massif du Nord, Marmelade, E. L. Ekman H. 8209(US, MO)；Massif de la Hotte, E. L. Ekman H. 9002(G)；Montagnes de la Hotte, W. J. Eyerdam 361 (NY).

将 *I. ekmanii* 的模式标本、产于海地和多米尼加的标本与生长在美国的北美小花八角比较，其性状完全在北美小花八角的变化幅度范围之内，它们之间没有明显区别，故将其归并入北美小花八角中。

11 野八角(云南经济植物)

Illicium simonsii Maxim. in Bull. Acad. Sci. St. Petersb. 32: 480. 1888. TYPE: India, Assam, Naga Hills, Simons s. n.(holotype, CAL!).

I. griffithii Hook. f. & Thoms. var. *yunnanense* Franch. in Bull. Soc. Bot. Fr. 33: 383. 1886.——*I. yunnanense* (Franch.)Finet & Gagnep. in Bull. Soc. Bot. Fr. 52: Mem. 4: 29.

1905. TYPE: China. Yunnan, Dali, Delavay 1883[lectotype (original syntype), here designated, P! isolectotype, A!], 246(original syntypes, P! A!).

I. manipurense Watt ex King in Ann. Bot. Gard. Calcutta 3: 200. pl. 40, B.1891, syn. nov. TYPE: India. Assam, Keyang and Ching Sow, on the Manipur-Burmese frontier, G. Watt 6585(holotype, CAL! isotypes, B! E! K!).

产中国、印度和缅甸,生于海拔 1500~4000 m 的山地沟谷、溪边、涧旁或山坡湿润常绿阔叶林中。

China. **Guizhou**(贵州): Weining(威宁), Y. D. Nie(聂永彤)673(GZHTM); Hezhang(赫章), K. M. Lan 366(GZAC); Bijie(毕节), C. Z. Liang(梁翠资)5971(GZDC); Nayong(纳雍), Bijie Exp. 483(HGAS); Zhijin(织金), S. C. Zhang(张升才)75(GZHTM); Anshun(安顺), Guizhou Exped. 1086(GZTM); Panxian(盘县), Anshun Exped. 1086(PE); Anlong(安龙), s. coll. 1278(IBSC). **Sichuan**(四川): Huidong(会东), T. L. Dai (戴天伦)11777(SM); Huili(会理), S. Y. Chen(陈善墉)11072(SM); Miyi(米易), S. Y. Chen 10610(SM); Yanbian(盐边), Yanbian Exped.(盐边队)46(SM); Ningnan(宁南), T.T. Yu(俞德浚)1446(N); Dechang(德昌), SWCTU 11856(SWCTU); Yanyuan(盐源), Yanyuan Exped. 185(SM); Xichang(西昌), X. Q. Liu(刘锡权)454(SM); Puge(普格), Sichuan Med. Pl. Exped.(四川药用植物调查队)25770(SM); Butuo(布拖), Sichuan Econ. Pl. Exped. 5882(SM); Jinyang(金阳), Sichuan Econ.Pl. Exped. 3206(SM); Zhaojue(昭觉), Zhaojne Exped.(昭觉队)470(SM); Xide(喜德), s. coll. 232(SM); Mianning(冕宁), T. T. Yu 18036(IBK); Yuexi(越西), Yuexi Exped. 2(SM); Meigu(美姑), Sichuan Econ. Pl. Exped. 5997(SM); Yunlian, Yunlian Exped.(筠连队)564(SM); Shimian(石棉), Shimian Exped. 78-1061(SM). **Yunnan**(云南): Gongshan(贡山), S. Jiang *et al*.(姜恕等)10015(KUN); Fugong(福贡), Qinghai-Xizang Exped.(青藏队)6992(KUN); Bijiang(碧江), H. T. Tsai(蔡希陶) 28234(SZ); Lanping(兰坪), S. K. Wu 8955(KUN); Lushui(泸水), S. Jiang *et al*. 8249(PE); Yunlong, Yunlong Exped. 105(SWFC); Eryuan(洱源), R. C. Ching(秦仁昌)23232(PE); Tengchong, L. N. Guo(郭丽娜)8239(SWFC); Yongping(永平), H. C. Wang(王汉臣)3537(PE); Yangbi(漾濞), Jinshajing Exped.(金沙江队)4185 (YUKU); Dali(大理), Delavay 246, 1883(P, A); Binchuan(宾川), SWFC 60687 (SWFC); Dayao(大姚), P. Qu(瞿平)60-66(KUN); Zhenxiong, Zhenxiong Exped.(镇雄组)3518(SWFC); Zhaotong(昭通), W. Y. Wu(胡万镛)8114(IBSC); Qiaojia(巧家), B. S. Sun(孙必兴)896(YUKU); Huize(会泽), H. W. Li 82(IBSC); Dongchuan (东川), NE. Yunnan Exped. 476(KUN); Kunming(昆明), Q. Lin 52(IBSC); Wuding (武定), S. Q. Huang(黄蜀琼)299(KUN); Luquan(禄劝), P. I. Mao(毛品一) 660 (HITBC); Xundian(寻甸), B. Y. Zhang(张伯英) 828(KUN); Fuming(富民), B. Y. Qiu 58757(KUN); Songming(嵩明), Y. F. Wei(魏永凡)8113(IBSC); Malong(马龙), Y. H. Li(李延辉)213(KUN); Chuxiong(楚雄), C. J. Wang(王从皎)84014(SWFC); Shuangbai(双柏), W. Q. Yin(尹文清)477(KUN); Xinping(新平), S. K. Wu 442 (IBK); Yuxi(玉溪), G. E. Tan(唐贵娥)8201(IBSC); Mile(弥勒), Mile Exped. 125(IBSC); Kaiyuan(开远), Y. Tsiang(蒋英) 13102(IBSC); Luchun, D. D. Tao 797(IBK); Yuanyang(元阳), Y. L. Yang

（杨雅玲）88032(N)；Jinping, Q. Huang（黄全）509(SWFC)；Malipo, K. M. Feng 22893(IBSC).

India. **Assam**: Keyang and Ching Sow, on the Manipur-Burmese frontier, 21 Apr. 1882, G. Watt 6585(B, E, K)；Chibaon, F. K. Ward 8050(K)；Subansiri Division, Cox & Hutchison 406 (K)；Kameng, G. Panigrahi 6839(CAL).

Myanmar. **Kachin**: Sumprabum Sub-Division, J. Keenan *et al*. 3486(E)；Myitkyina, C. W. D. Kermode 17179(K).

I. manipurense 的模式标本，除花梗较长以外，与 *I. simonsii* 无异。看过 10000 余份八角属标本以后，没有发现与 *I. manipurense* 的模式标本相同的标本，而模式标本采集人 G. Watt 在附近采的 G. Watt 6146 号标本则明显是野八角。因此，本人认为 *I. manipurense* 的模式标本是一株野八角在 1882 年 4 月发生变异而形成的长花梗类型，而其它年份该植株应是正常生长，故将它作归并处理。

12　匙叶八角（云南植物研究）

Illicium spathulatum Wu in Bot. Jahrb. 71: 175. 1940. TYPE: China. Guangxi, Pingnan, S. S. Sin 3720[lectotype(original syntype), IBSC!), 323(original syntypes, IBSC! SYS!), 3903 (original syntype, IBSC!).

I. brevistylum A. C. Smith in Sargentia 7: 50. 1947. TYPE: China. Guangxi, Xiangzhou, C. Wang 40122(holotype, A! Isotypes, IBK! IBSC!), 40132(paratypes, A! IBSC!)；Pingnan, C. Wang 39210(paratypes, CAS! IBSC! PE!)；Guangdong, Lechang, C. L. Tso 20321(paratypes, NY! IBSC! PE!)；Renhua, W. T. Tsang 8736(paratypes, IBSC! NY! PNH!), 26260 (paratypes, E! IBSC! SYS!)；Wengyuan, S. K. Lau 2627 (paratypes, A! IBSC!)；Zengcheng, W. T. Tsang 20099(paratypes, A! BH! IBSC! KUN! MO! NY! N! PE! SYS! US!), 20397 (paratypes, A! BH! MO! NY!)；Hunan, Yizhang, W. T. Tsang 23516(paratypes, A! G! IBSC! SYS!).

I. leiophyllum A. C. Smith in Sargentia 7:54. 1947, syn. nov. TYPE: China. Hongkong, Mt. Nicholson, W. J. Tutcher s. n., HK 4661(holotype, A 39113, A! isotypes, A[2]!).

中国特有，生于海拔 300 ~ 1500 m 的山地湿润常绿阔叶林中。

China. **Fujian**(福建): Shunchang, G. S. He 316(FJSI)；Nanping, G. Y. Lin(林国宇) 1419(FNU)；Minhou(闽候), H. H. Chung(钟心煊)1271(AU)；Shanhang, G. Y. Lin 204 (FNU)；Nanqing, L. K. Ling 3652(FNU)；Pinghe, R. C. Lin 3717(FNU). **Guangdong**(广东): Lechang, C. L. Tso 20321(NY, IBSC, PE)；Renhua(仁化), W. T. Tsang 8736(IBSC, NY, PNH), W. T. Tsang 26260(E, IBSC, SYS)；Ruyuan, Guangdong Wood Exped.(广东木材队)98(CANT)；Liannan, Z. S. Zhu(朱志淞)60571(IBSC)；Yangshan, L. Deng 165(PE)；Huaiji(怀集), Y.G. Liu 2542(HIB)；Fengkai, K. C. Ding(丁广奇)6219 (IBSC)；Zhaoqing, IBSD 12265(IBSD)；Xingyi, C. Wang 38050(SN)；Yangchun, C. Wang 38553(IBSC)；Taishan, Yue 73-2629(IBSC)；Wengyuan, S. K. Lau 2627(A, IBSC)；Yingde(英德), P. H. Liang 84506(SN)；Xinfeng, H. G. Ye 1064(IBSC)；Conghua, Q. Lin 67(IBSC)；Longmen, C. F. Wei(卫兆芬)121880(KUN)；Zengcheng, W. T. Tsang 20099(A, BH, IBSC, KUN, MO, NY, N, PE, SYS, US), 20397(A, BH, MO, NY)；Jiaoling, L. Deng 4858(IBSC)；Fengshun, X.

G. Li 201493(IBSC). **Guangxi**(广西): Quanzhou, J. Y. Luo 7011(GXMI); Longsheng, D. A. Huang 60075(CSFI); Xingan, Guangxi Exped. 663(IBSC); Lingui, Q. H. Lu 70(IBK); Rongshui, S. H. Chun 16509 (IBSC); Hexian, H. C. Chen(陈亨春)500277(FJSI); Zhaoping, C. Z. Jiang(蒋承曾)4240(IBK); Mengshan(蒙山), C. H. Tsoong 84996(IBK); Jinxiu, Dayaoshan Exped. 811886(GXMI); Xiangzhou, C. Wang 40122(A, IBK, IBSC), 40132(A, IBSC); Pingnan, S. S. Sin 3720(IBSC), 323(IBSC, SYS), 3903(IBSC), same loc., C. Wang 39210 (CAS, IBSC, PE); Mashan, s. coll. 517(IMD); Wuming, N 60325(N); Ningming, C. C. Chang 12894(IBSC). **Hongkong**(香港): Mt. Nicholson, W. J. Tutcher s. n., HK 4661(A 39111, 39112, 39113, A!). **Hunan**(湖南): Chengbu, T. R. Cao 820813 (HNNU); Yizhang, W. T. Tsang 23516(A, G, IBSC, SYS). **Yunnan**(云南): Pingbian, P. I. Mao 3519(KUN); Maguan, K. M. Feng 13635(KUN); Funing, C. W. Wang 88642(KUN).

将 *I. spathulatum*、*I. brevistylum* 与 *I. leiophyllum* 的模式标本和各模式产地之间的标本按相邻产地连接起来排列比较,各标本之间呈连续变异,没有地理隔离,故将它们作归并处理。

13 马来亚八角 新拟名

Illicium stapfii Merr. in Philip. Journ. Sci. Bot. 13: 67. 1918. TYPE: Malaysia. Sabah, Mt. Kinabalu, Clemens 10995(lectotype, PNH!), 10949(original syntype, PNH!).

I. peninsulare A. C. Smith in Sargentia 7: 56. 1947, syn. nov. TYPE: Malaysia. Pahang, Fraser Hill, M. Nur 11247(holotype, A!); Burkill & Holttum 8444(paratype, SING!); Sunju Ichat, Jaamat 27551(paratype, SING!); Selangor: Sempang, H. N. Ridley 15691(paratypes, K! SING!).

产马来西亚和泰国,生于海拔 600~2200 m 的山地林中。

Malaysia. Johore: Gunong Panti, E. J. H. Corner 29213(SING). **Pahang**: M. Nur 11247 (A), Burkill & Holttum 8444(SING), Sunju Ichat, Jaamat 27551 (SING). **Perak**: Gunong Kerbau, M. Haniff 4017(K). **Sabah**: Mt. Kinabalu, Clemens 10949, 10995(PNH). **Sarawak**: G. Mulu, path from Sg. Melinau Paku, J. A. R. Anderson 4554(SING). **Selangor**: Sempang, H. N. Ridley 15691(K, SING).

Thailand. Pangnga: Khao Pawta Luang Keow, R. Geesink *et al*. 7613(B). **Ranong**: Kao Pawta Luang Keo, A. F. G. Kerr 16956(A).

I. peninsulare 的模式为幼果或终花期标本,其枝、叶、幼果与马来亚八角无区别。

14 东亚八角(台湾植物志)

Illicium tashiroi Maxim. in Bull. Acad. Sci. St. Petersb. 32: 479. 1888.——*I. anisatum* Linn. var. *tashiroi* (Maxim.) E. H. Walker in Journ. Jap. Bot. 46(3): 67. 1971, syn. nov. TYPE: Japan. Ryukyu Islands, Iriomote Island, Apr. 1887, A. Tashiro s. n.(unknown).

产日本(琉球群岛)和中国(台湾),生于海拔 2000~2200 m 的山地湿润常绿阔叶林中。

Japan. Ryukyu Islands: Iriomote Island, E. H. Walker & S. Tawad 6886(L); Ishigaki Island, M. Furuse 902(RSA).

China. Taiwan(台湾): Yilan(宜兰), Kanehira 21192(A); Taizhong(台中), Liu *et al*.

377(TAI); Pingdong(屏东), A. Henry 1316(NY).

心皮数目是本属分种的一个重要性状,本种心皮11~13枚,与白花八角明显不同,故本人不赞成E. H. Walker(1971)将该种作降级组合处理的观点。

经上述归并、改级或组合处理后,本文确认全世界八角属植物共计有34种3亚种1变种,其名录如下:

1. 假地枫皮 *I. angustisepalum* A. C. Smith
2. 华中八角 *I. fargesii* Finet & Gagnep.
2a. 华中八角 *I. fargesii* Finet & Gagnep. subsp. *fargesii*
2b. 川茴香 *I. fargesii* Finet & Gagnep. subsp. *szechuanensis* (Cheng)Q. Lin
3. 东亚八角 *I. tashiroi* Maxim.
4. 白花八角 *I. anisatum* Linn.
5. 中缅八角 *I. burmanicum* Wils.
6. 喜马拉雅八角 *I. wardii* A. C. Smith
7. 野八角 *I. simonsii* Maxim.
8. 文山八角 *I. tsaii* A. C. Smith
9. 佛罗里达八角 *I. floridanum* Ellis
10. 大八角 *I. majus* Hook. f. & Thoms.
11. 披针叶八角 *I. lanceolatum* A. C. Smith
12. 红茴香 *I. henryi* Diels
13. 红花八角 *I. dunnianum* Tutch.
13a. 红花八角 *I. dunnianum* Tutch. var. *dunnianum*
13b. 宽叶八角 *I. dunnianum* Tutch. var. *latifolium* Q. Lin
14. 地枫皮 *I. difengpi* K. I. B. & K. I. M. ex B. N. Chang
15. 厚叶八角 *I. pachyphyllum* A. C. Smith
16. 里德利八角 *I. ridleyanum* A. C. Smith
17. 八角茴香 *I. verum* Hook. f.
18. 小叶八角 *I. parvifolium* Merr.
18a. 小叶八角 *I. parvifolium* Merr. subsp. *parvifolium*
18b. 少药八角 *I. parvifolium* Merr. subsp. *oligandrum* (Merr. & Chun)Q. Lin
19. 北美小花八角 *I. parviflorum* Michx. ex Vent.
20. 古巴八角 *I. cubense* A. C. Smith
21. 小花八角 *I. micranthum* Dunn
21a. 小花八角 *I. micranthum* Dunn subsp. *micranthum*
21b. 岭南八角 *I. micranthum* Dunn subsp. *tsangii* (A. C. Smith)Q. Lin
22. 薄叶八角 *I. tenuifolium* (Ridley)A. C. Smith
23. 基纳巴卢八角 *I. kinabaluense* A. C. Smith
24. 少果八角 *I. petelotii* A. C. Smith
25. 匙叶八角 *I. spathulatum* Wu
26. 柬埔寨八角 *I. cambodianum* Hance
27. 马来亚八角 *I. stapfii* Merr.
28. 厚皮香八角 *I. ternstroemioides* A. C. Smith
29. 茎生花八角 *I. cauliflorum* Merr.
30. 苏门答腊八角 *I. sumatranum* A. C. Smith
31. 台湾八角 *I. arborescens* Hayata
32. 藏印八角 *I. griffithii* Hook. f. & Thoms.
33. 假野八角 *I. pseudosimonsii* Q. Lin
34. 滇缅八角 *I. merrillianum* A. C. Smith

致谢 感谢下列标本馆馆长给予借阅、查阅、交换标本、赠送标本复印件和相片或标本资料: A, AAUF, ANF*, ANUB, AU, B, BCMM, BH, BJFC, BM, BNU, C, CAF, CAL, CANT, CAS, CDBI, CDRI, CNU, CSFI, E, F, FJDC, FJFC, FJSI, FLAS, FMP, FNU, FUS, G, GB, GNUB, GXDC, GXMI, GZAC, GZHTM, GZTM, HAST, HBG, HEAC, HENU, HGAS, HHBG, HIB, HITBC, HKU, HNNU, HSNU, HUF, HUIF, HUTN, HWA, HZU, IBK, IBSC, IBSD, IBUG, IMC, IMD, JXAU, JXCM, JXU, K, KEP, KUN, L, LBG, LD, LINN, LY, LZU, M, MEXU, MIN, MO, MPU, N, NAS, NF, NWFC, NY, NYA, P, PE, PEY, PH, PNH, RSA, S, SAN, SANU, SCFI, SHM, SHTU, SING, SINU, SM, SN, SNUA, SWCTU, SWFC, SYS, SZ, SZG, TAI, TAIF, TUS, UC, US, W, WAG, WH, WNU, WUK, XBGH, YUKU, Z, ZJFC, ZM, ZT。

---

* ANF=安徽省林科所植物标本室, CNU=长沙水电师范学院植物标本室, FJDC=福建省药检所植物标本室, GZHTM=贵州省中药所植物标本室, HKU=香港大学植物标本室, 其余标本室代号依 Holmgren *et al*., 1990 和 Fu Li-Kuo *et al*., 1993。